AMENDMENTS TO THE CLAIMS:

Replacement Claim Set:

1-138. (Canceled).

139. (Currently Amended) A sheath comprising a hollow body, the sheath being adapted to removably cover at least part of an implantable medical device that carries a therapeutic substance, ~~and having sheath material comprising:~~

~~the sheath material is adapted to removably cover at least part of an implantable medical device comprising a therapeutic substance; and~~

~~the sheath material is adapted for removal from the implantable medical device before device implantation,~~

~~and~~ wherein the sheath material prevents the therapeutic substance from significantly absorbing into the sheath, wherein the sheath material has an oxygen transmission rate of not more than 200 cc/100 in^2 for 1 mil per 24 hours at 73°F, 75% relative humidity and 1 atmosphere, and wherein the sheath material has a water vapor transmission rate of not more than 20 gm/100 in^2 for 1 mil per 24 hrs. 100°F 90% relative humidity and 1 atm.

140. (Previously Presented) The sheath of Claim 139 wherein the implantable object is a balloon integrated with a catheter.

141. (Previously Presented) The sheath of Claims 139-140 wherein the balloon material, sheath material, or both comprise the same or different polymeric material.

142. (Previously Presented) The sheath of Claim 141 wherein the polymeric material comprises a polyurethane having a glass transition temperature above a storage temperature.

143. (Previously Presented) The sheath of Claim 141 wherein the polymeric material comprises a polyurethane having a non-polar soft segment wherein the non-polar soft segment is selected from hydrocarbons, silicones, fluorosilicones, or their mixtures.

144. (Previously Presented) The sheath of Claim 141 wherein the implantable object comprises a stent.

145. (Previously Presented) The sheath of Claim 141 wherein the polymeric material comprises polyolefins, polyurethanes, derivatives of cellulose, polyesters, polyamides, poly(hexamethylene isophthalamide/terephthalamide), poly(ethylene terephthalate-co-p-oxybenzoate), poly(hydroxy amide ethers), polyacrylates, polyacrylonitrile, acrylonitrile/styrene copolymer, rubber-modified acrylonitrile/acrylate copolymer, poly(methyl methacrylate), liquid crystal polymers, poly(phenylene sulfide), polystyrenes, polycarbonates, poly(vinyl alcohols), poly(ethylene-vinyl alcohol), epoxies composed of bisphenol A based diepoxides with amine cure, aliphatic polyketones, polysulfones, poly(ester-sulfone), poly(urethane-sulfone), poly(carbonate-sulfone), poly(3-hydroxyoxetane), poly(amino ethers), gelatin, amylose, parylene-C, parylene-D, parylene-N, or their mixtures.

146. (Previously Presented) The sheath of Claim 141 wherein the balloon material, sheath material, or both comprise a therapeutic substance contacting surface.

147. (Previously Presented) The sheath of Claim 146 wherein the therapeutic substance contacting surface contacts a coating comprising a main-group-element oxide.

148. (Previously Presented) The sheath of Claim 147 wherein the main-group-element oxide comprises a silicon oxide, metal oxide, or a mixture of a silicon and a metal oxide.

149. (Previously Presented) The sheath of Claim 141 wherein the sheath material lines at least a portion of the inner surface of the sheath in a layer.

150. (Previously Presented) The sheath of Claim 149 wherein the implantable object is disposed within the sheath for transportation or storage.

151. (Previously presented) The sheath of Claim 141 wherein the material is selected from:

polyurethane having a glass transition temperature above a storage temperature;

polyurethane having a non-polar soft segment wherein the non-polar soft segment is at least one of hydrocarbons, silicones, fluorosilicones, or mixtures thereof;

at least one cellulose derivative selected from cellulose acetate having a degree of substitution greater than about 0.8, ethyl cellulose, cellulose nitrate, cellulose acetate butyrate, methyl cellulose, or mixtures thereof;

sulfonated polymers;

fluorinated polymers;
carbide compounds;

nitride compounds;

a polyolefin that is at least one of polyethylenes, poly(vinyl chloride), poly(vinylidene chloride), poly(vinyl fluoride), poly(vinylidene fluoride), poly(tetrafluoroethylene), poly(chlorotrifluoroethylene), or mixtures thereof;

a polyester that is at least one of poly(ethylene terephthalate), poly(ethylene 2,6-naphthalene dicarboxylate), poly(butylene terephthalate), or mixtures thereof;

a polyamide that is at least one of nylon-6; nylon-6,6; nylon-6,9; nylon-6,10; aromatic nylon; or mixtures thereof; and

and any combinations thereof.

152. (Previously Presented) The method of Claim 151 wherein the polymeric material comprises a polyurethane having a glass transition temperature above a storage temperature.

153. (Previously Presented) The method of Claim 151 wherein the polymeric material comprises a polyurethane having a non-polar soft segment wherein the non-polar soft segment is selected from hydrocarbons, silicones, fluorosilicones, or their mixtures.

154. (Previously Presented) The method of Claim 151 wherein the implantable object comprises a stent.